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Beyond Financial Need: Predictors of Student Loans and Student Loan Attitudes

By Jill M. Norvilitis and Meghan J. Batt

Although public concern about student loan debt has been increasing, little research has examined predictors of debt beyond financial need or demographic factors. The present study explored the role of several psychological and attitudinal variables in student loan debt among 189 college students. Results indicate that loan initiative and loan resignation attitudes predicted level of student loan debt. In addition, locus of control, delay of gratification, and social comparison are also related to loans and loan attitudes. Parental instruction marginally predicted loan attitudes, but not loan totals. Overall, these results suggest the need to consider non-need based factors when counseling students about accepting loans.

Keywords: *Student loans, attitudes, delay of gratification, locus of control*

Student loan debt has increased dramatically in recent years, eclipsing all other forms of consumer debt except mortgages and surpassing the \$1 trillion mark (Lee, 2013). Although 40% of borrowers owe less than \$10,000, 30% of borrowers owe more than \$25,000 (Lee, 2013). Politicians have described this as a crisis, with Senator Elizabeth Warren declaring in *Rolling Stone*, “Rising student-loan debt is an economic emergency ... It’s stopping young people from buying homes, from buying cars and from starting small businesses. We need to take action” (Dickinson, 2014). Despite the magnitude of debt, relatively little research examines predictors of debt beyond demographics and financial need.

Student loan debt is of concern because higher levels of debt are associated with lower levels of well-being. In a study using National Longitudinal Survey of Youth 1997 data, those with more student loans were found to have poorer psychological functioning, though parental wealth moderated this relationship; greater parental wealth was associated with worse functioning as loans increased, but the opposite was true among children of less-wealthy parents (Walsemann, Gee, & Gentile, 2015). Student loans are also associated with financial anxiety, more so than are other types of student debt (Archuleta, Dale, & Spann, 2013). Further, it is not entirely clear that student loans are positively associated with graduation rates. Some research has found lower levels of college persistence among those with loans (McKinney & Backscheider Burrige, 2014), while others suggest that persistence rates increase with student loans of up to \$10,000, but decrease when loans exceed \$10,000 (Zhan, 2014). There are also concerns that student loan debt will constrain career choices. At present, results in this area are murky, with some data supporting this view (Choi, 2014).

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Another area of concern is that many students do not have a strong understanding of loans, which may lead to unwise choices about debt assumption or issues with repayment in the future. For example, Andruska, Hogarth, Needles Fletcher, Forbes, and Wohlgemuth (2014) examined student loans and loan knowledge in 800 college students. Among these, one-eighth of students reported that they had not taken out a loan when, in fact, they had. An additional 35% of students underestimated the amount of their loans, many by more than \$10,000.

Much of the popular media reporting about student loans associates the rise of student loans solely with the rise in educational expenses and students' financial need. While this is undoubtedly part of the issue, it is noteworthy that not every student who is eligible for student loans takes them out. Indeed, Cadena and Keys (2013), using data from the National Postsecondary Student Aid Study, report that fully one in six students offered student loans turns them down. The authors report that students with a high unmet financial need are more likely to take out loans and that students from families earning the least (and thus eligible for grants) and families earning the most (and thus needing less assistance) are less likely than middle-income families to accept loans. However, financial need does not appear to fully explain why some students accept loans and others do not. Cadena and Key's results suggest that self-control may play a central role.

Although financial need and the rise in educational expenses do not fully account for student loans, relatively little research has examined predictors of student loan debt. One line of work in this area has examined typologies of debt attitudes. Students report different attitudes toward student loans, which may affect students' likelihood to take out loans, their likelihood to take out the maximum loan possible, and their later repayment of loans. Harrison, Chudry, Waller, and Hatt (2015) completed a qualitative analysis of interviews with 62 students in the United Kingdom, reporting seven different basic attitudes. About one-third of students fell into each of the following categories (students could fall into multiple groups): Debt-Positive, Debt-Savvy, Debt-Resigned, and Debt-Oblivious. An additional one-fifth of students fell into the Debt-Anxious and Debt-Angry categories. Only two students were in the Debt-Free group. This preliminary work suggests interesting future research, including the development of measures to assess these groups and work examining correlates of each of the categories. These categories appear to show some correspondence with Mueller's (2013) categorization of perceptions of the student loan experience itself into Duress (students using terms such as painful and anxious to describe the process), Mandatory (terms such as imperative and assist), Financial (terms such as costly and debt), and Success (terms including fair and opportunity) groups. However, these groups of attitudes have not been examined as predictors of debt outcomes.

Studies have also examined students' willingness to borrow to pay for college. Perna (2008) examined high school students at low-, middle-, and high-resource schools in five states. Results indicated that students from low-resource schools were more likely to view taking out a loan as a risky choice, whereas students in middle- and high-resource schools believed that benefits outweigh the risks. Comments from the students' parents mirrored these beliefs, suggesting that parenting and socioeconomic status (SES) may both affect student loans and loan attitudes. Lee and Mueller (2014) reported that first-generation college students, who are more likely to come from lower SES backgrounds, are both more likely to rely on loans and to weigh heavily the choice to take on debt. Other research examining the role of SES has found that SES is predictive of students taking out student loans initially, but it is not predictive of the amount of loans received (Houle, 2013), supporting the contention that financial need alone does not explain why some students take out more loans than others.

Thus, it is likely that individual psychological factors play a role. In one of the few studies focused on psychological factors, Norvilitis and Mendes-da-Silva (2013) examined a handful of characteristics, including delay of gratification, financial self-confidence, social comparison, parenting, and attitudes toward debt. Of

these, only delay of gratification was a significant predictor for students in the United States and only financial self-confidence was a predictor for students in Brazil.

Chudry, Foxall, and Pallister (2011) examined attitudes toward borrowing as an application of the theory of planned behavior. The theory of planned behavior (Ajzen, 1991) conceptualizes behavior as the result of a combination of attitudes, subjective norms, and perceived behavioral control. Chudry et al. (2011) reported support for this model in a study involving student loans, because their study found all three of these factors affected intention to borrow.

Expanding on Chudry and colleagues' (2011) work, the present study sought to examine psychological predictors of debt and attitudes toward debt. We assessed perceived behavioral control through delay of gratification and locus of control. We examined subjective norms through parental instruction and through social comparison, and also examined attitudes toward student loans. We expected that these three factors would together predict student loans, such that greater delay of gratification, more internal locus of control, more positive parental instruction, and loan attitudes showing less resignation and more initiative would predict fewer student loans.

Method

Participants

A total of 189 college students in a medium-sized, northeastern public college participated. Of these, 40 (21%) were male and 148 (78%) were female. Further, 25 (13%) were first-year students, 45 (24%) were sophomores, 53 (28%) were juniors, 50 (27%), and 16 (9%) were fifth-year seniors or beyond. Ethnicity generally reflected that of the college: 132 (70%) were Caucasian, 32 (17%) were African American, 19 (10%) were Hispanic, 5 (3%) were Asian, and 1 (< 1%) was Native American. Most students ($n = 137$, 73%) were employed, with 25 (17.8%) working more than 30 hours per week.

Materials and Procedure

Students in classes across campus were asked to complete a survey examining views on student loans. We distributed surveys in class to be returned at the following session. Students received extra credit for participating. We measured student loan debt through one item that asked students to identify whether they had no student loan debt, less than \$10,000 in student loans, between \$10,000 and \$19,999 in loans, between \$20,000 and \$29,999 in loans, and \$30,000 or more in loans. We selected this ordinal approach because of students' difficulty in accurately reporting debt (Andruska et al., 2014). Rather than rely on students to report precise numbers, the survey asked students to generally classify themselves as having more or less student loan debt.

In addition to demographic items and items about their student loan and work history, we included the following measures:

Attitudes Toward Student Loans Scale (created for the present study). This 11-item measure applied a five-point Likert-type scale from agree completely to disagree completely. Principal components factor analysis with varimax rotation yielded three factors. Loan Initiative ($\alpha = .61$) comprised four items reflecting students' belief that if they work hard they can pay off their loans without trouble (e.g., "Student loans don't have to haunt you for decades if you take the initiative to pay them off."). Loan Acceptance ($\alpha = .49$) comprised three items related to positive attitudes toward loans (e.g., "I don't have to work because I can take out loans to cover my daily expenses."). Loan Resignation ($\alpha = .46$) comprised three items that

reflected negative attitudes toward loans and lenders (e.g., “Student loans are a burden and I feel that I will have student loan debt for many years to come.”). One item (“I had to take out a student loan, but I work to pay it off in a timely manner.”) did not load significantly on any factor and was excluded from subsequent analyses.

International Personality Item Pool (IPIP) Locus of Control Scale. This measure consists of 20 questions that assess internal and external locus of control using a scale rating from 1 (not at all like me) to 4 (very much like me). Internal consistency was good ($\alpha = .85$). Higher scores indicate greater internal locus of control.

Delay of Gratification (Ray & Najman, 1986). This 12-item measure is scored yes, no, or unsure. It covers deferment of gratification in purchases as well as in other areas (e.g., “Would you describe yourself as often being too impulsive for your own good?”). Higher scores indicate greater self-reported delay of gratification. Ray and Najman report acceptable internal consistency of the scale ($\alpha = .72$). In the present study, it was .66.

Parental Financial Education Scale (Norvilitis & MacLean, 2010). The Parental Financial Education Scale is composed of 25 statements about how participants’ parents taught them about money, either directly or indirectly. Items are scored on a five-point Likert scale from 1 (strongly disagree) to 5 (strongly agree). The original scale comprises four subscales: Parent Instruction (parents directly teaching about money management), Parent Facilitation (parents modeling money management by facilitating budgeting, etc.), Parent Worries (parents frequently worrying about their own finances), and Parent Reticence (parental reluctance to discuss money at all). In the original study, the four subscales demonstrated good to fair internal reliability, with Cronbach’s alphas of .86, .79, .77, and .69 respectively. In the present study, the reliability coefficients were .82, .75, .70, and .60.

Financial Social Comparison (Norvilitis & Mao, 2013). The nine-item scale is scored on a scale from 1 (strongly disagree) to 5 (strongly agree). In the present study, one item was not strongly correlated with the scale (“I feel rich compared to most of my friends.”). With that item removed, internal consistency was acceptable ($\alpha = .78$).

Results

How Students Pay for College

Students reported a variety of means to pay for college during the year studied. Of the participants, 47 (25%) reported that their parents were paying for all of their tuition in the current year. An additional 67 (35%) reported that their parents were helping them with tuition. Further, 54 (29%) reported using savings and 25 (13%) were working during the school year specifically to pay for school. Many students reported receiving grants or scholarships: 120 (64%) received some assistance that will not need to be repaid. However, only 42 (22%) reported receiving enough to fully cover tuition and books.

Beyond this, student loans were common, with 117 (62%) reporting receiving a federal student loan and 31 (16%) reporting taking out a private student loan. In taking out loans, respondents reported the following: 35 (19%) were receiving less than the amount of tuition, 31 (16%) were receiving only enough to cover tuition, 20 (11%) were accepting more than tuition only but less than the maximum offered, and 37 (20%) were accepting the full amount offered which was greater than tuition. Fifteen (8%) students reported paying at least some amount toward their loans while still in college. Twelve (6%) students reported taking out loans while also reporting that their parents were paying their full tuition.

Participants reported Total Loan Amount on a five-point scale. A total of 133 (71%) participants reported ever taking out a federal or private student loan and 127 (67%) reported current loan debt. Overall, 55 (29%) students reported having no student loan debt. An additional 46 (24%) reported less than \$10,000 in student loans. Other students reported more debt: 43 (23%) reported between \$10,000 and \$19,999, 23 (12%) reported between \$20,000 and \$29,999, and 15 (8%) reported \$30,000 or more in total student loans.

Relations between Loans and Loan Attitudes

The three loan attitude subscales were relatively independent of one another: Loan Initiative was negatively related to Loan Resignation ($r = -.20, p = .008$) and not related to Loan Acceptance ($r = .11, p = .13$). Loan Resignation and Loan Acceptance were positively related ($r = .21, p = .004$). Loan Total Amount was related to Loan Resignation ($r = .40, p < .001$), but unrelated to Loan Initiative ($r = .06, p = .42$) or Loan Acceptance ($r = .06, p = .43$).

Bivariate Relations between Loans, Loan Attitudes, and Predictor Variables

We calculated correlations between Loan Total and the Loan Attitude subscales and the predictor variables (see Table 1).

Regression Analyses Predicting Loans and Loan Attitudes

We used three regression analyses to examine the relationship between personality factors and student loans. In each case, we entered Student Year in School on the first step because we expected that student loan debt would increase with year in school. We initially entered the predictor variables of Locus of Control, Delay of Gratification, Financial Social Comparison, Parent Instruction, Parent Facilitation, Parent Worries, and Parent Reticence on the second step. Collinearity diagnostics indicated significant overlap between Parent Instruction and Parent Facilitation, however, so we excluded Parent Facilitation from the regressions (see Table 2).

Loan Initiative was predicted by Locus of Control, such that those with a more internal locus of control reported greater initiative. In addition, Parental Worries approached significance, such that those whose parents worried more about money reported greater initiative, as did Year in School, such that earlier students tended to be more likely to report initiative [$R = .33, R^2 = .11, \text{Adj. } R^2 = .07, F(7, 161) = 2.86, p = .008$]. Loan Acceptance was predicted only by Year in School, such that acceptance decreased with advancing year in school, although a more external locus of control and more parental instruction about money approached significance [$R = .32, R^2 = .10, \text{Adj. } R^2 = .06, F(7, 163) = 2.59, p = .02$]. Finally, Loan Resignation was predicted by increasing Year in School and lower levels of Delay of Gratification [$R = .42, R^2 = .17, \text{Adj. } R^2 = .14, F(7, 163) = 4.89, p < .001$].

We calculated an ordinal logistic regression to examine the relationship between personality factors and loan attitudes in predicting student loans. We entered the predictor variables Year in School, Locus of Control, Delay of Gratification, Financial Social Comparison, Parent Instruction, Parent Facilitation, Parent Worries, and Parent Reticence on the second step. In addition, we included the three loan attitude measures to examine the unique information provided by the personality and attitudinal variables. Results indicated that increasing Year in School and higher levels of both Loan Resignation and Loan Initiative were predictive of loans. In addition, lower ability to delay gratification and greater financial social comparison approached significance (see Table 3).

Table 1. Relations between Loan Total, Loan Attitudes, and Predictor Variables

	Locus of Control	Delay of Gratification	Financial Social Comparison	Parent Instruction	Parent Facilitation	Parent Worries	Parent Reticence
Loan Total	.06	-.13	-.08	-.08	-.11	.14*	.15*
Loan Initiative	.28***	.08	-.05	.12	.08	.13	-.12
Loan Acceptance	-.21**	-.05	.13	.06	.07	.04	.10
Loan Resignation	-.19**	-.33***	.14	-.18	-.16*	.20**	.24**

Note: * $p < .05$, ** $p < .01$, *** $p < .001$

Table 2. Summary of Regression Analyses Predicting Loan Attitudes

Predictor Variable	<i>B</i>	<i>SE B</i>	β	<i>R</i> ²
<i>Loan Initiative</i>				
Step 1				
Year in School	-.06	.05	-.10	.01
Step 2				
Year in School	-.09	.05	-.13 [†]	.11**
Locus of Control	.50	.15	.28***	
Delay of Gratification	.05	.18	.02	
Financial Social Comparison	.03	.09	.03	
Parent Instruction	.03	.09	.00	
Parent Worries	.12	.06	.15 [†]	
Parent Reticence	-.06	.09	-.07	
<i>Loan Acceptance</i>				
Step 1				
Year in School	-.13	.04	-.22**	.05**
Step 2				
Year in School	-.11	.04	-.20**	.10*
Locus of Control	-.24	.13	-.16 [†]	
Delay of Gratification	-.10	.16	-.06	
Financial Social Comparison	.04	.08	.04	
Parent Instruction	.14	.08	.18 [†]	
Parent Worries	-.00	.06	-.01	
Parent Reticence	.09	.07	.12	
<i>Loan Resignation</i>				
Step 1				
Year in School	.10	.05	.14	.02
Step 2				
Year in School	.13	.05	.19**	.17***
Locus of Control	-.16	.15	-.09	
Delay of Gratification	-.55	.19	-.25**	
Financial Social Comparison	.01	.10	.01	
Parent Instruction	.01	.09	.01	
Parent Worries	.10	.07	.11	
Parent Reticence	.11	.09	.11	

Note: [†] $p < .10$, * $p < .05$, ** $p < .01$, *** $p < .001$

Table 3. Summary of Ordinal Logistic Regression Predicting Student Loan Debt

Predictor Variable	Estimate	SE	Significance
Loan Total: <\$10,000	6.18	2.41	.01
Loan Total: \$10,000 - \$20,000	7.58	2.43	.002
Loan Total: \$20,000 - \$30,000	9.01	2.46	<.001
Loan Total: >\$30,000	10.28	2.49	<.001
Year in School	.62	.14	<.001
Locus of Control	.60	.41	.14
Delay of Gratification	-.91	.48	.06
Financial Social Comparison	-.43	.24	.07
Parent Instruction	.14	.23	.54
Parent Worries	.14	.17	.41
Parent Reticence	.26	.22	.24
Loan Initiative	.46	.22	.04
Loan Acceptance	.24	.24	.32
Loan Resignation	.98	.22	<.001
Log likelihood	441.79		
Nagelkerke R ²	.35		
Chi-square	67.44		

Discussion

It is clear that student loans are an increasing issue for college students. In a recent survey by Citizens Financial Group (2014), 47% of former college students agreed with the statement, “I would have considered not going to college had I known the impact student loans would have on my life” and 77% agreed that “I wish I had planned better to manage my student loan debt.” This is nearly the inverse of a study more than 40 years ago in which 80% of former students reported attitudes that were highly favorable or favorable about student loan borrowing (Harrison, 1972). Although attitudes toward loans are quite negative, student loan debt has been rising steadily over time. According to the U.S. Department of Education National Center for Education Statistics (Woo, 2013), in 1993, 49% of college graduates had student loans. By 2008, that number had risen to 66%. In constant dollars, the average debt was \$15,000 in 1993 and \$24,700 in 2008. Despite this rise in both negative attitudes and prevalence, little is understood about what leads to higher levels of debt. The present study examined psychological factors associated with higher levels of self-reported debt.

Results indicated that loan attitudes were associated with higher levels of debt. Higher levels of both Loan Initiative and Loan Resignation were related. Loan Initiative items reflected a much more proactive stance toward loans, suggesting that students believe that they can pay their loans off if they work hard. Loan Resignation items were more negative, indicating that students feel that loans are inevitable if one wants a college education. Because this study represents a snapshot in time, it is impossible to know if these attitudes lead to different outcomes in the future. Longitudinal work examining whether those with high loan initiative do, in fact, pay off their loans quickly would be helpful.

Delay of Gratification and Financial Social Comparison were both significantly related to Loan Debt in the bivariate correlations and approached significance in the overall regression model. These two constructs have been found to be related to financial well-being as well as other types of debt among college students, such as credit card debt (Norvilitis & Mao, 2013; Norvilitis & Mendes-Da-Silva, 2013). Further, Locus of Control is predictive of student loan attitudes, which also supports prior research in credit card debt (Norvilitis, Szablicki, & Wilson, 2003). This suggests that some of the same processes may be at work in student loan debt as other types of consumer debt.

Given this pattern of results, there is some support for the theory of planned behavior as an explanation for student loan debt. Certainly attitudes were predictive, though Loan Initiative was in the opposite direction of what we anticipated. It is possible that Loan Initiative indicates optimism about paying off loans that encourages students to assume debt. Subjective norms, as assessed by social comparison, approached significance in the regression model for student loans. However, this effect was small and requires replication. It is interesting that parental education variables, though significant in bivariate correlations, did not contribute to Loan Totals, though they did approach significance in predicting Loan Initiative and Loan Acceptance. It may be that parenting shapes attitudes, but students may not choose to follow their parents' financial guidance and values when actually taking out loans. Finally, perceived behavioral control, as assessed by delay of gratification, also appears to influence loan decision making.

Given the relative importance of delay of gratification, another way of viewing this is from a temporal myopia perspective: People are more likely to choose a smaller reward today rather than a larger reward later. The degree to which people engage in this delay discounting has been found to be related to behavioral impulsivity and is a partially heritable trait (Anohkin, Grant, Mulligan, & Heath, 2015).

If it is true that similar factors predict different types of debt and that delay discounting processes affect student loan debt, then it is possible that similar interventions at both the individual and college level may produce results. In the case of credit card debt, a combination of public awareness, federal regulations, and individual attitudes appears to have begun to decrease levels of student debt (Norvilitis & Mendes-Da-Silva, 2013). Research in temporal myopia has found that focusing attention on future rewards and outcomes may reduce delay discounting (Radu, Yi, Bickel, Gross, & McClure, 2011). Future research should further examine these issues, including whether financial education programming in high school or college affects these relationships.

Despite the promising nature of the present study, some limitations temper the conclusions. Most noteworthy among these is the reliability of some of the measures. The loan attitude subscales are based on few items and thus demonstrate some instability. Further development of these measures is necessary. In addition, we completed the study on one college campus, a medium-sized public institution. It is possible that different results might be obtained at private institutions or other types of schools. The nature of self-reports limited the measure of student loans. Future research should replicate this study with actual loan amounts.

Nonetheless, it appears that psychological factors and not just financial need help to explain college student loan debt. This is encouraging because it suggests that there may be interventions available to help students make the choices that will best meet their financial needs as they plan for their careers.

Nexus: Connecting Research to Practice

- Factors beyond financial need affect college students' decisions to take out student loans. These factors include attitudes toward loans and delay of gratification and suggest that students may choose what seems best in the short term without thinking about the future. Practitioners should be aware of the influence of personality factors in students' choices. Research in related fields has found that increasing the focus on future rewards, such as by imagining how one's future self would view the decision, can help with this temporal myopia. Practitioners may wish to encourage students to do this when considering options to pay for college.
- Many students will require loans to complete their degrees, and loans allow them to achieve their college goals. For those students who must borrow, practitioners may wish to address differing loan attitudes. It is possible that attitudes may have different effects on repayment or default. Working with students to have more proactive loan initiative attitudes, rather than attitudes of resignation, may help students to feel empowered to use loans and repay them responsibly.

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